

Although his style is very prosy and plebeian, every student must have his Vitruvius, and carefully digest the meaning, although it is often difficult to be got at, from the complete absence of his relation being divided into periods, there being no full-stop made in any page. The entire manner of Gothic construction will be found in his rules, and every edifice of Athlone, William the Conqueror, and Edward III. is derivable therefrom. The church at Nuremberg is precisely what he describes as a tetrastyle, with the columns placed inside instead of externally. Vitruvius's book is divided into ten parts or divisions: the third division has been ably illustrated by the late professor of architecture, Mr. Wilkins. Fourteen hundred years after Vitruvius, when great changes were operating, Alberti wrote his work, also divided into ten books: there is no other writer so logical. The next writer in point of date was Serlio, who lived a good deal in France, where he was employed by Francis I. The earliest edition of his work is dated 1545: he employed Peruzzi, also an able painter, who treated perspective admirably in his pictures. It was a subject of sincere regret that his writings were not translated and published for extensive use. The first edition was so rare that the Professor had never seen it. Vassari, although a text-book of the first order in the fine arts, had never been translated: a talented lady was now occupied on it. After Serlio came Philibert de Lorme, who published a curious and valuable work, the more interesting to us, as he is the earliest writer on the architecture of northern Europe. He treats particularly of vaulting in stone, and was very ingenious in adapting Italian and classical ideas to the requirements of northern habitations, by introducing, among other things, the use of large windows, so essential in our dull and often clouded atmosphere. He treats also of the high curved roofs so often seen in France, and gives many notions to make chimneys ornamental to a building. One of the best examples of grouping chimneys for architectural effect is seen at King's Weston, near Bristol, by Sir John Vanbrugh. A more glaring deforming of a beautiful building could hardly be devised than the spires of all kinds and irregular form that surmount Somerset-house, when viewed from the river. In general, De Lorme's learning goes to show that in French works a good deal of ingenuity is thrown away. He is also cautious in his instructions how the architect is to conform with civility to all the gradations of a household, from the butler down to the gentleman's gentleman, and does not fail to paint a vivid caricature of a busy body discovering a mare's nest. The succeeding lecture will continue the analyses of other writers upon the science and practice of architecture.

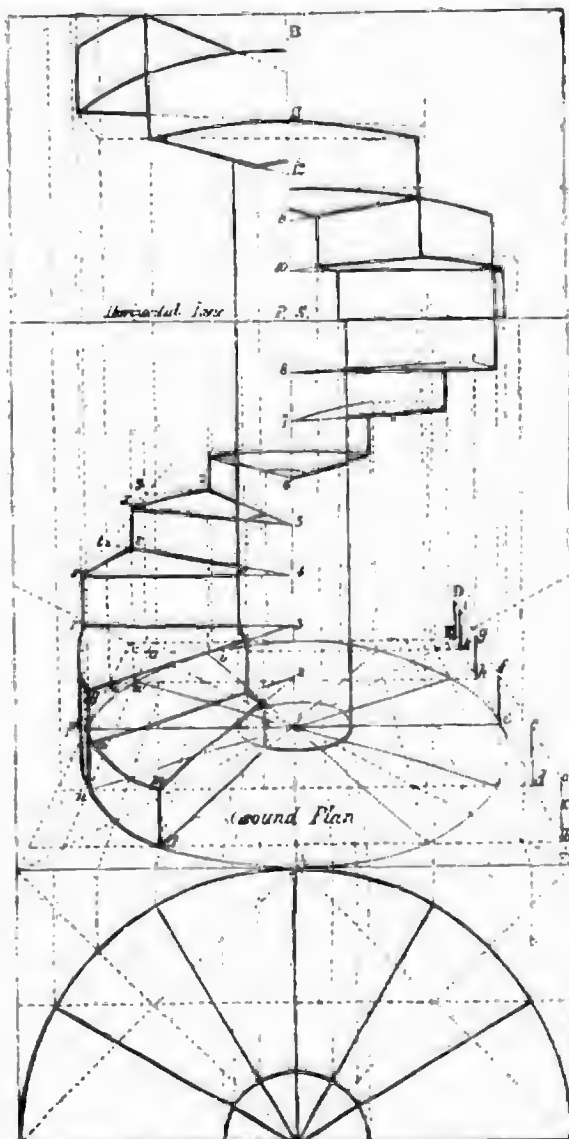
# BATH CITY WATERWORKS. CONTRACTORS' ACCOUNTS.

AT a meeting of the Bath town-council, held on the 14th inst., a report was received from the committee relative to the arbitration case that had been pending between the corporation and Mr. W. Baker, of Bristol, their contractor for the formation of reservoirs at Bathampton. These reservoirs were designed by Messrs. Manners and Gill, of Bath, for supplying the city with water, and were completed in 1849: since that period difficulties have existed in the settlement of accounts, and in May last the parties agreed to refer the matter to arbitration. Mr. James Simpson was chosen by Mr. Baker, and the corporation named Mr. Thos. E. Blackwell: these gentlemen, not agreeing, determined on availing themselves of their powers, and called in Mr. Brunel as a third referee to act with them. Mr. Baker's claim was as follows:—For cash remaining due to him on account of his contract for reservoirs, 636*l.*; for pipes furnished by him, 300*l.* 10*s.*; for extra work, 2,18*l.* 16*s.* 4*d.* Mr. Baker's total claim, therefore, was 2,951*l.* 6*s.* 4*d.* The arbitrators having held numerous sittings at Westminster, and taken depositions on oath from both parties, have awarded to Mr. Baker 1,132*l.*, having struck off from his demand 1,833*l.* 6*s.* 4*d.* The cost of the works, therefore, will have been, exclusive of iron pipes not in contract, 7,161*l.* 10*s.*, being an excess above the contract sum of 396*l.* 10*s.*

## TO DRAW A WELL OR SPIRAL STAIRCASE.

PREPARE a ground plan by describing a circle and dividing it into as many parts as there are steps passing once round the column in the centre, then the usual method of drawing the circle in perspective will pro-

duce the ground plan. Draw at any height the horizontal line and the perpendicular AB from the centre of the circle: the place where this perpendicular cuts the horizontal line will give the point of sight PS. At one side of the ground plan make a vanishing scale, CDEF. Let CF be the height of a



step on the same scale employed in the circle: CF, ed, ed, ef, gh, ik, and DE, will represent the heights of the steps as they recede from the eye. The whole of the ground plan must be carefully prepared before the elevation is commenced; then begin by laying off the first step at *lm*, equal to *ad*, and upon the perpendicular from the centre of the ground plan mark off the other end of the step 1, 2, equal to *ef*; repeat this measurement upwards, producing the points 3, 4, 5, 6, &c.; draw *m* 2; from the point *m*, the place over which the next step commences, draw *no*, equal to *ed*; join *o* 2, and *o* *m*, with a slight curve, to correspond with *m* 1, over which *o* *m* is placed: this will finish the first step. For the second, make *o* equal to *o* *m*, or *ed*; join *q* 3; make *r* 3 parallel to *p* 1, because this line is placed exactly over the line *p* 1 in the ground plan; make *r* *s* equal to *ef*; join *s* 4, which will be parallel to *r* 3; produce a line from *s* towards the point of sight, stopping at *t*, which will represent the *p* *s* of the ground plan in an elevated position; join *t* *e* parallel to the horizontal line,—this will be an elevated representation of *a* *v*; join *e* *v* by a curve corresponding to *p* *w*; join *e* 4, and the third step is completed. Make *e* *x* equal to *ag* on the scale; join *s* 5, draw a line from *s* towards the PS, stopping at *y*, which will represent *w* *o* of the ground plan; draw *y* *s*, parallel to the horizontal line, to represent *a* *b* of the ground

plan; join *x* *x* by a curve as *w* *b*; join *s* 5, and another step is finished. The same directions may be repeated for each of the remaining steps. Care must be taken to place the corners of each step upon the perpendicular line which comes from their representative corners in the ground plan, as each step has its corresponding portion of the circle perspective given in the ground plan."

JAMES CHAPMAN.

MILDEW IN BOOKS.—I send the following receipt, which I have copied from a book containing many others:—"Take a feather dipped in spirits of wine and lightly wash over the backs and covers. [Indebted to THE BUILDER for this.] To prevent mould, put a little into writing ink." Another, "To take mildew out of linen:—Mix powdered starch and soft soap with half the quantity of bay salt: mix it with vinegar, and lay it on both sides with a painter's brush. Then let it lie in the open air till the spots are out."—Notes and Queries.

The following is a quotation from the "Jeu de l'Esprit," taken from the directions for drawing the same subject on a square:—"Qui voudra faire ces montres rondes il n'a qu'à réduire le carré en rond selon les pratiques précédentes et il aura toute la même facilité qu'il au carré: et ce qui est le plus à noter." With all due deference, it will be found, upon examination, that the detail shown ceases to be like that of the square; therefore, I have employed a method of working it out which differs so far as regards the rounding off each step to produce the circle as it succeeds, which is the characteristic difference between the two subjects.